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Vol. 2

No. 3

MONTHLY BULLETIN

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PENNSYLVANIA

Department of Labor and Industry

JOHN PRICE JACKSON, Commissioner



A BULLETIN OF INFORMATION FOR THE PUBLIC

MARCH, 1915

HARRISBURG, PA.
WM. STANLEY RAY, STATE PRINTER
1915



Vol. 2

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MONTHLY BULLETIN

OF THE

PENNSYLVANIA

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PERSONNEL OF THE DEPARTMENT OF LABOR AND INDUSTRY

The Commissioner, who has charge and direction of the Department, is John Price Jackson.

The Industrial Board consists of:

George S. Comstock, Mechanicsburg; James C. Cronin, Philadelphia; John P. Wood, Philadelphia; Mrs. Samuel Semple, Titusville; John Price Jackson, Chairman, and Louis A. Irwin, Secretary of the Board.

The Chief of the Bureau of Inspection is Lew R. Palmer, who is assisted by the members of the Division of Industrial Hygiene given below; W. H. Blakeslee, Medical Inspector; Elizabeth B. Bricker, Medical Inspector; Jacob Lightner, Supervising Inspector for Philadelphia; Francis Feehan, Supervising Inspector for Pittsburgh; district inspectors, etc.

The Division of Industrial Hygiene and Engineering consists of John C. Price, Chief of the Division and Chief Medical Inspector; John H. Walker, Civil Engineer and fire prevention expert; Richard M. Pennock, Mechanical Engineer and expert in heating and ventilation; John S. Spicer, Chemical Engineer. The Commissioner and Chief Inspector are members ex officio of this Division.

The Chief of the Bureau of Statistics and Information is Alfred R. Houck, who is assisted by Wilson I. Fleming, Assistant Chief; W. H. Horner, Statistician; Collectors of Statistics, clerks, etc.

A permanent Chief has not yet been appointed for the Bureau of Arbitration and Mediation. The Acting Chief, F. P. Vincent, is assisted by members of the Department.

The Attorney for the Department is Richard W. Williamson, assisted by Howard Benton Lewis.

James A. Steese is Chief Clerk and has associated with him bookkeepers and stenographers.

Publications are under the general direction of the Division of Hygiene with John S. Spicer acting as Editor.

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THE PURPOSE OF THE BULLETIN.

In publishing the Monthly Bulletin, it has been the intention to bring before the public different articles and items bearing on all phases of the safety movement which is sweeping rapidly over this country. It has been extremely gratifying to the officials of the Department of Labor and Industry to note the interest which is being manifested throughout the Commonwealth in this safety movement. A general acceptance of the fact that a large proportion of accidents can be avoided is being noted, and it is the aim in publishing this Bulletin to aid the cause of safety. It would be a great help if those at the head of safety movements in their respective plants would send in news items concerning the work which is being accomplished or is being undertaken along safety, sanitary or welfare lines. These items should contain statistics concerning the reductions of accidents, accounts of avoidable accidents, or copies of pictures showing how accidents have occurred or of devices which have proven valuable in the prevention of accidents.

It is manifestly impossible for this publication to be of maximum service to the industries of Pennsylvania unless all those interested in this work will actively assist by giving their advice and experience. The columns of this Bulletin are open to all, and it is the earnest wish of the Department that all persons interested in safety work in this Commonwealth will give their fullest co-operation.

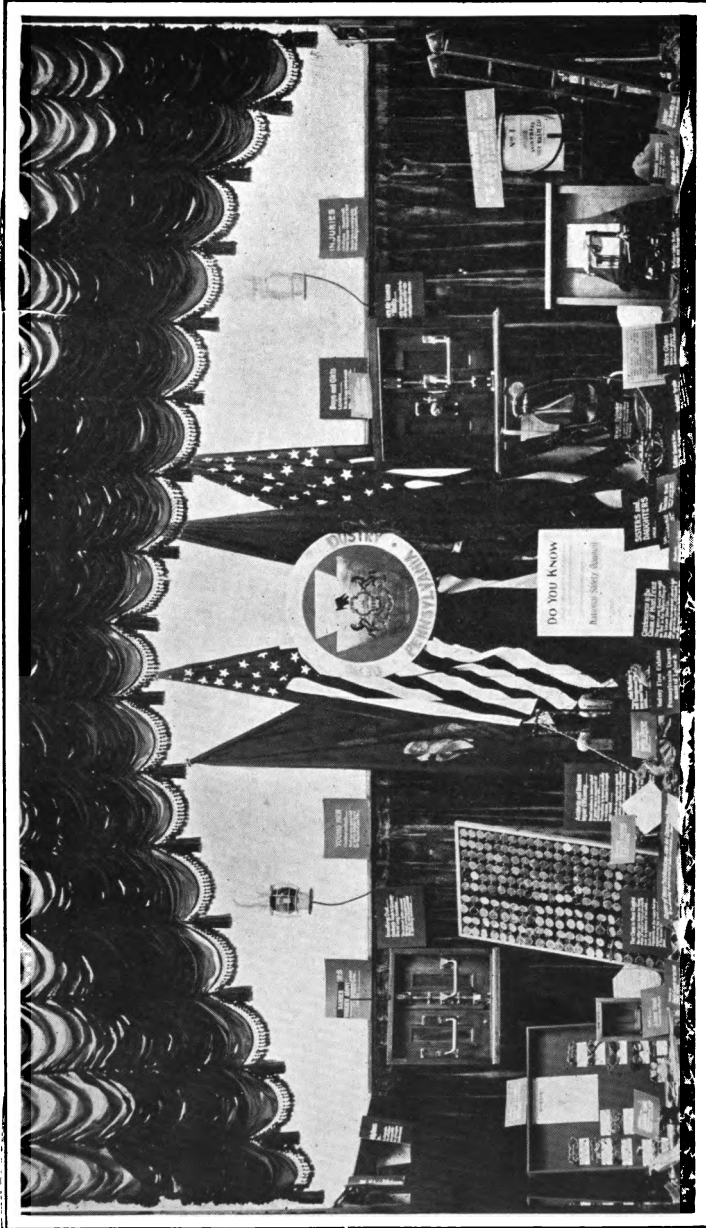
The Safety Exhibit which is now being shown in different cities in the eastern part of the State—mention of which is made in another article—is attracting considerable attention. If there is any particular vicinity where it is thought that its presence might help to inaugurate or encourage a safety movement, the Commissioner will be glad to hear of it, and if arrangements can be made, the exhibit will be sent there free of expense.

The mailing list for the Bulletin is rapidly being filled up; but, as there is still a large number of copies which are available for distribution, it is urged that those who wish additional copies sent to individual addresses, or those who have new addresses to suggest, will send them in at once, so that they can be listed immediately.

Unfortunately, owing to the large amount of printing which has been made necessary by the meeting of the Legislature, and on account of other unavoidable delays, the appearance of the last few

issues of this Bulletin has been irregular. It was impossible to avoid this condition; but it is hoped that, beginning with the April issue, it will be possible to resume the regular issuance of this Bulletin.

With this issue, a series of articles dealing with phases of the safety work of several of the companies in this State will be commenced. As notice and information of the activities of other companies, along the same line, are brought to the attention of the Editor of the Bulletin, other articles will be published from time to time.



(Courtesy of The Iron Age, N. Y.)
**TRAVELING SAFETY EXHIBIT IN STORE WINDOW OF MCCREERY & CO., PITTSBURGH. ARRANGED
BY MR. C. A. VOSBERG, HEAD DECORATOR.**

TRAVELING SAFETY EXHIBIT.

The Department of Labor and Industry has conducted several safety exhibits since the beginning of the year, the first one being held in a window of McCreary & Company's Department Store, in Pittsburgh. This exhibit by the Department held in Pittsburgh was one of a group of exhibits of safety devices. The other contributors to the group included seven manufacturing companies and two railroads. It was owing to the efforts of Mr. C. A. Vosberg, head window decorator, that the display was arranged in a manner that was very attractive to the public. On one day, when a count was made, it was found that 25,000 persons had stopped to view the windows.

Other exhibits have been held since this time exclusively by the Department of Labor, in Harrisburg, in the windows of Dives, Pomerooy & Stewart's Department Store, and in York, in the store windows of Charles H. Baer & Company.

The aim of an exhibit of safety devices is to educate the public as to the means used at the present time to protect the workmen in our State's industries against accident. The Department of Labor has gathered together a number of the most important of these devices to use in displays. The principal articles in the exhibit are as follows: a pulmotor for resuscitating injured workmen; wood working machinery guards; different kinds of guards and devices for those who work in metal products; safety signs of all descriptions; a frog guard for railroad tracks; tongs for holding chisels; fire prevention and fire fighting apparatus; foundry leggings; safety lamps; safety electric switches; engine safety water gauges; governor guard; safety lathe dogs; eye goggles; safety set-screws and many other different articles.

It is hoped that manufacturers who become interested in such exhibits will keep the Department informed of new safety devices. The Department would also be glad to receive models of articles of this kind for use in these displays. As plans are being made to have the Department's exhibit continuously shown from place to place in the Commonwealth throughout the year, there will be ample opportunity to use a great variety of articles for exhibit, and to acquaint the public with their use.

SAFETY WORK IN THE INDUSTRIES OF PENNSYLVANIA.

(Editor's Note: The following items have been prepared concerning the safety work of the respective establishments in so far as their activities have come to the attention of the Editor. It is hoped that other companies will send in reports of their efforts along safety lines, which can be published under this heading.)

NEW JERSEY ZINC COMPANY, PALMERTON, PA.

This company has been for some time keenly interested in the safety movement and in general safety work. It has spent many thousands of dollars in furnishing guards wherever they were needed. An elaborate exhibit has been prepared and has been placed in position in New York at the various safety conventions. It was located in Harrisburg at the Welfare and Industrial Efficiency Conferences, and it has been taken even out to Columbus, Ohio, at the recent conference held in connection with the Labor Department of that State. Mr. J. D. James, who is in charge of the safety work of that company, has the active and personal support of all the head officials of the company. He claims that safety work is useless unless all the officials become actively interested and give it their complete support. When this interest has been obtained, it is much easier to obtain the co-operation of the foreman and other employes.

It was largely through the co-operation of Mr. James and Mr. Francis P. Sinn, Superintendent of this plant, that the Traveling Safety Exhibit of the Department of Labor and Industry became a reality. They were among the first to offer a number of different devices for this purpose. At the beginning, these devices formed the main portion of the Exhibit. Now, through the example set by this company, many other concerns have donated devices and pictures for this purpose. Mr. James has originated many devices to prevent a recurrence of accidents, among which might be mentioned the following:

A safety life belt for the use of men who are engaged in unloading hopper cars. This belt was originated a few hours after one man had been killed by slipping down through the hopper and being smothered to death by the material which was being unloaded. Since that time, all men are required to wear the belt under penalty of discharge, and since that time no more deaths from that cause have occurred.

Tongs for holding chisels or drills are another of his safety devices. By the use of these tongs, it is impossible for men holding drills or chisels to be hit with the heavy sledges used in connection with these tools. The number of bruised or broken hands and wrists has been greatly reduced by the use of this simple and inexpensive holder.

Another sort of device is safety wrenches for opening hopper cars. Frequently when men have been attempting to open hopper cars, the wrenches have swung back, hitting those holding them, and causing injuries which have sometimes resulted in death. By means of these wrenches, this chance of accident is eliminated, and the operation is made easier. Drawings of this wrench will be sent if a request for them is made to the company, as the latter are very anxious to advance in every way possible the Safety Habit.

THE ATLAS PORTLAND CEMENT COMPANY, NORTHAMPTON, PA.

The safety work of this company is under the charge of H. T. Raisbeck, chief engineer. He is ably assisted by various other officials and workmen. This company has a corps of safety inspectors, appointed from among the workmen of the various department. These inspectors report all places and practices which, in their opinion, are dangerous and should be corrected. As a result of these recommendations, the company has installed a great number of safety devices for the protection of their men, and with a very gratifying reduction in the number of their accidents.

The Atlas Portland Cement Company was among those who were first instrumental in helping to make the Traveling Safety Exhibit a success. This company furnished signs and safety devices for use at the Allentown and York Fairs last years, and afterwards made models of these devices and presented them to the Department for permanent use in the Traveling Safety Exhibit.

Mr. Raisbeck and those associated with him have perfected many individual guards and safety devices for use around their own plant. Noteworthy among these are an expanding mandril and driver. This device has no exposed projecting parts to catch in workmen's clothing. The driving power is transmitted from the shaft to the sleeve by means of a hardened steel ball contained in a groove in the sleeve. This groove is eccentric to the centre of the shaft, and on rotating the two parts are locked together by means of this ball. This and quite a few other models are among those presented to the Department.

The safety inspectors are fortunate in having the enthusiastic support of the officials. Their work has been productive of much good and has resulted in a reduction in the number of accidents.

PRESSED STEEL CAR COMPANY, McKEES ROCKS, PA.

There are three safety committees connected with the Pressed Steel Car Company, a general committee, and two plant committees, one at each works, McKees Rocks and Allegheny. The general committee, which meets weekly, is composed of the assistant to the general manager, the labor agent, the master mechanic of each plant, the civil engineer and electrical engineer. Each plant committee, which meets monthly, is composed of the master mechanic as chairman, and of foremen of various departments. The plant superintendents are ex-officio members of all the committees.

The plants are divided into districts, and the plant committee is divided into sub-committees of two, to inspect and report on a given district. The personnel of the sub-committees and their district assignments are changed periodically. The general committee considers the reports of the plant committees and any other safety matters which may come up, and makes recommendations for the approval of the general manager.

A fire marshal devotes his entire time to inspection of fire equipment, etc., seeing that apparatus and fire lines are in good condition, passageways clear, etc. He makes regular reports on these matters, as well as on sanitary conditions. Each plant has a closed circuit fire alarm system and a well-equipped fire department made up of employees. Company police patrol the plant day and night, and report on any unsafe or insanitary conditions coming to their notice.

A surgeon, employed by the company, devotes his entire time to the employees of both plants, each of which has an emergency hospital with a competent attendant. Serious eye cases are referred to a specialist in Pittsburgh.

The Labor Department, in addition to their other duties, visit the sick and injured employees at their homes and at the hospitals.

At the McKees Rocks plant, the company has a village, consisting of a large number of double frame houses, a brick apartment house which contains bathing facilities free to all residents of the village, a church, a public school, playgrounds and an assembly hall, known as the Casino, which is used for classes, dances and entertainments of various kinds.

A village superintendent has general supervision of the welfare work and the property in the village. Various organizations among employees promote social and educational pursuits. Classes in Eng-

lish and drawing for men are held under the auspices of the Y. M. C. A. of Pittsburgh. Classes in English and sewing are conducted for women and children under the direction of the Phoebe Brashear Club of Pittsburgh. For a number of years, prizes have been awarded on the Fourth of July for the best kept premises. The results have been most gratifying.

EXITS AND ENTRANCES.

As Inspectors of the Department of Labor and Industry have been making inspections throughout the State, they have observed frequently a lack of attention to exits, entrances and passageways. Too little attention has been given to see that these places are free from obstructions, or would not offer danger in case the occupants of a building, panic stricken by fire or accident, would make a rush for the outside. Frequently passageways have been used as storehouses. Ladders, standing or lying down, cleaning apparatus, tools, trunks, boxes and refuse of all kinds are left there. No thought is given to the fact that these articles might cause people on occasions of excitement to stumble and fall. Others pressing on behind them would trip over them, and serious injury might result to many.

Two instances, which were noticed recently during inspections of factories by Inspectors of the Department of Labor and Industry, are worthy of note:

In one case, an Inspector was on the upper floor of a factory building, and he noticed a door leading out to an overhead bridge to another building. On testing the door latch, he found this open, and started to walk out across the bridge. The manager, who was accompanying him at that time, became very much excited, and calling loudly, said: "Come back. Don't go out there; there are some broken boards on that bridge, and you might fall through." That this bridge should be left in a dangerous condition was something which never should have been permitted. Any employee who had no knowledge of this condition might unnoticed have made an attempt to walk across the bridge. His ignorance, for which he could not be blamed, might have cost him his life. Until repairs had been made so that the bridge was safe, all doors leading to it should have been nailed or fastened shut to prevent possible danger to any person.

Another instance was that of a factory which was located on the second and third floors of a building. The only stairway for exit and entrance ran from the second story to the street at the side of a storeroom. Immediately in front of the stairway at the bottom, and directly behind the entrance door, was located an elevator shaft. Persons who entered and left that building had to use this stairway and were in danger of being hurt by the elevator, as they had to pass directly over the floor of the elevator if it was at the street level, or under it if it was in the upper part of the shaft. If the elevator

had been descending at the time a person opened the door to enter to the stairway, one step forward would no doubt have meant instant death to that person. Likewise, there was a similar danger to people leaving the building by this stairway, unless they had made special note of the location of the elevator. Such a condition was inexcusable, and instructions were immediately given the management to provide some other means of exit and entrance.

Many other conditions of a similar nature might be cited; but it is thought that these two examples will bring out the point that intelligent thought should be given to these matters. Too often in alterations of old buildings, the persons in charge or those making the alterations, lose sight of the safety of the occupants who must use the reconstructed building, and pay attention only to convenience of operation and cost of construction.

HAND LABOR.

One of the most important facts shown by the tabulation of the accidents reported to the Department of Labor and Industry for the year 1914, is the tremendous number of accidents caused by hand labor. Of the 38,126 accidents reported, 20,339, or considerably more than half, were due to this one cause. Under this head are included only such accidents as occurred in connection with the handling and piling of material, such as workmen being struck by falling material, or caught by material, or being hurt while using hand trucks, wheelbarrows or hand tools, and other accidents of a similar nature. They do not include a large number of accidents which occurred to hand laborers by falls, stepping on nails, and accidents due to machinery of all kinds.

The important consideration in studying these figures is that they represent in nearly all cases accidents which could not have been prevented by the use of guards or safety devices. They are caused by the carelessness or indifference of the men themselves, and verify the statement frequently made by students of accident prevention, that less than one-fifth of the accidents can be prevented by guards. The vast majority of these accidents must be prevented by care and thought on the part of the men themselves.

This statement should not be taken to mean that these accidents cannot be prevented, or that the employers are not largely responsible for their reduction. But this reduction must be accomplished not only by providing the men with safe tools and appliances, but also by educating them to use these tools in a safe manner. This education in safety can best be accomplished through the agency of shop safety committees among the workmen. These committees, under the direction of an administrative officer of the company, can properly investigate all unsafe practices or places about the establishment, and make recommendations for their correction, and have in charge all safety activities. By periodically changing the men on these committees, the interest in the movement and the responsibility for its operation can be extended to practically all of the reliable employees.

No establishment is too large, and none too small, to be greatly benefitted by organizing such committees as are suggested above. They present the most effective method for educating all the employees of

an establishment, from president to sweeper, to the necessity of thinking and working for safety. It is only by this thinking and working for safety that the great number of accidents due to hand labor can be successfully reduced.

DEFECTIVE STAIR TREADS.

An examination of causes of accidents which were reported to the Department of Labor and Industry during 1914 show that 3,437 were caused by slipping or tripping. Accidents of this nature are generally due to inequalities or unevenness in the floors, passageways, stairways, etc.

Frequently, inspectors of the Department notice, as they make inspections in various establishments throughout the Commonwealth, that there are very many stairways in a dangerous condition. In some cases, owing to the nature of the establishment, material has been deposited on the steps which makes them uneven. In many instances, wooden stairways are found to be so worn by the constant tramping of many feet, that the treads in some portions are almost worn through. As this worn-out condition is found usually on the front edge of the tread, many manufacturers have corrected this condition by reversing the treads, and using the under side.

The danger which such irregular and uneven surfaces occasion is very seldom realized by the owners of the buildings in question until the matter is called to their attention. Many accidents have been caused by such defects, and, for that reason, the attention of the public is directed to this dangerous condition found in so many places. Frequently, where such conditions exist, no handrails have been provided, and a person tripping on the steps would have nothing to grasp in order to regain his balance. A slight misstep on a stairway without a handrail might result in serious accident, while a similar misstep on a stairway provided with a handrail might have no serious result.

Iron or stone stairways, the treads of which have been worn smooth, are often as serious a menace to safety as ones with defective treads. This condition should also be looked after and means used to correct the defect. In some cases, this may be done by roughing the surface of the steps by suitable methods, or else covering them with material of a "non-slip" character.

The Department of Labor and Industry would, therefore, urge all owners of buildings, where employees or the public are accustomed to using the stairways, to see that these stairways are maintained in a safe condition and are provided with handrails. Where stairs are less than 8 feet in width, handrails should be provided on each side;

and where the width is 8 feet or more, centre handrails should be provided. If these suggestions are carefully carried out, there will be fewer accidents upon stairways in industrial establishments and public buildings.

DANGERS FROM REVOLVING SHAFTS AND SET-SCREWS.

During the year 1914, the Department of Labor and Industry received reports of 38,126 accidents, of which 2,836 occurred in connection with machine work, and 238 of these from coming into contact with moving shafts, pulleys, belts or set-screws. There were 80 cases of crushes and bruises from such causes; 89 cases of cuts and lacerations; and 51 cases of fractures, sprains and dislocations. Sixteen of these accidents were fatal.

In view of the great number of accidents from such causes, the Industrial Board of the Department of Labor and Industry has issued a series of regulations for Power Transmission Machinery. These regulations include standards for set-screws, for keys, for guarding of shafts, for pulleys, etc.

Concerning set-screws, the regulations provide that all projecting set-screws in moving parts of machinery shall be removed and replaced by flush set-screws. Concerning keys: all projecting keys in revolving shafts, where such keys are exposed to contact, shall be made flush or shall be guarded. The above provisions aim to eliminate the danger from protruding parts of machinery; in this case, from set-screws and keys. Any protruding portion of a revolving shaft or pulley is apt to catch in the clothing of a workman, and draw him into the machinery. From such an accident there would result serious injury, if not loss of life. The new type of set-screws, the socket-screw, or screw flush with the outer surface of any part of a machine, does away with such danger. But the old type of screw, if it remains, should be guarded. Concerning shafts: horizontal shafts less than six feet from the floor or working platform level, including dead ends of shafts, shall be guarded or protected by a standard railing, as provided for horizontal belts. Shafts less than twenty feet above floor or ground level, and located over driveways, shall be guarded.

The importance of this latter regulation for the guarding of horizontal shafts may be more readily understood when the story is called to mind of the girl who was arranging her hair at a mirror hung just beneath a low horizontal shaft in a factory. In throwing her hair back, it became entangled in the shaft. Had not the machinery been stopped in time, it is probable that her scalp would have been torn from her head.

Concerning vertical shafts, the regulations are as follows: vertical shafts shall be encased or guarded to a height of six feet from floor or working platform, or be guarded by a standard railing with not less than 15 inches clearance. Concerning pulleys and belts and other parts of power transmission machinery, there are also careful regulations as to safe construction or guards to protect dangerous parts.

The Department of Labor and Industry is using all the means in its power to organize safety movements and to stimulate the public mind to constructive methods in the furtherance of industrial safety. Copies of the regulations of the Industrial Board, on the subject of safeguarding Power Transmission Machinery, or other machinery, may be obtained by applying to the Department of Labor and Industry, Harrisburg, Pa.

INJURIOUS EFFECTS OF DUST.

One of the most injurious factors in any industry is the dust created by the various processes; but, as important as is the elimination of dust to the health of the workmen, very little has been done in the way of accomplishing such an elimination. Only of recent years have our employers realized their responsibility for the physical condition of their employees, as affected by the processes at which they work; or realized the economic value to them of maintaining employees in good health.

Dust has been left without special consideration, since, from the popular standpoint, it is merely "dust." But a careful examination of the effect of dust in industries upon the health of workmen who are constantly exposed to its presence, has proven it one of the chief causes of physical disturbances.

Dust consists of small particles of matter that float about in the air. No air is entirely free from it; but in industries where dusty processes are continuously being carried on, the air is overcharged with dust at all times. The human body is so constructed as to resist injurious substances to a remarkable degree; but when a constant strain is put upon it, its power of resistance decreases to the point where injurious effects rapidly develop. In any dust-creating process in an industry, a workman in good health may withstand injurious effects for a considerable period, but at last will yield to a slow but progressive undermining of health.

Dust creates ill effects in different ways according to its nature. Some kinds of dust, such as that produced in lead trades, are absorbed into the system, through the skin or the lungs, or by getting into the stomach with the food. If this dust is of a poisonous nature, it may create serious disease in such a manner. Other kinds cannot be absorbed, but are irritative to the membranes and tissues. Dust that is composed of sharp bits of matter may enter the eyes and create inflammation, or into sores upon the skin, or cause inflammation in the mucous membranes of the nose and mouth. It takes considerable time for dust of any sort to penetrate deeply into the lungs and do serious injury to them; but this, after a time, also takes place. Statistics show great numbers of death from pulmonary phthisis among the workers in dusty trades. One table of mortality statistics reports 2.39 per cent of deaths due to phthisis per thousand in occupations without dust, against 5.42 per cent due to phthisis per thousand in dusty trades.

An indirect injury from dust is from explosions that are apt to occur in industries where the air is loaded with explosive dust, such as coal dust or dust from grain. This dust, coming into contact with sparks, or open flames, or heated metal, is likely to explode and do great damage, and perhaps injure workmen in the vicinity of the explosion. Many such accidents have occurred, which prove the importance of eliminating explosive dust from the atmosphere of any building or enclosed area.

Careful methods for eliminating dust from our industries would greatly improve the health of employees. The isolation of the dusty processes in separate buildings or rooms would prevent the spreading of dust through a whole building. The placing of exhaust hoods over the machinery and a careful exhaust system would carry off a great deal of this injurious matter. Also the moistening of materials and the damp cleaning of a dusty room, in fact, the use of water in general to keep dust from spreading, is one of the cheapest remedies, where it is possible to use it, for much of the difficulty. The use of vacuum cleaners is one of the best ways of removing dry dust. The proper construction of a building also aids in such an elimination of dust. Polished surfaces, slanting sills, sloped covering for beams, and other such devices would prevent dust from accumulating in neglected places.

An important factor in the protection of the workman from dust is the sort of clothing he wears, and the proper cleansing of the skin. In some industries where there are exceptionally dusty processes, the employers provide a regular uniform for employees, which is made of material woven very tightly so as to prevent dust from penetrating it. Special shoes and gloves are provided in many such places. Respirators are also provided. Workmen object to these latter appliances, however, because so far no respirator has been invented which is entirely comfortable for any length of time.

One of the best ways of preventing injury from dust is by habits of personal cleanliness. In industries where wash rooms are provided, with warm water, soap and towels, and a supervisor to see that the washing process is thorough, much danger from dust is removed.

Medical examination at regular intervals is an essential measure for safeguarding against diseases that are likely to arise from the constant exposure to injurious dust. An examination that shows physical injury to a workman from a certain process should result in that workman's removal to another task, until the symptoms are destroyed by proper treatment. An interchange of positions where a process is likely to be injurious if worked at during long periods by one employee, is one of the best means of preserving the health of the workmen.

The Department of Labor and Industry is doing all in its power to aid and encourage all improvements in the industries of our State which tend towards the protection and preservation of the health of the employees. This is a subject of vital importance to the Commonwealth, and deserves the thoughtful interest of every person. It is hoped that in a very short period of time the State may attain to the most improved hygienic conditions throughout its industries.

PROSECUTIONS DURING 1915.

The Department of Labor and Industry is especially gratified by the willingness with which the laws and regulations under the jurisdiction of the Department have been complied with. The instances have been rare in which prosecutions have been necessary.

The following table shows the number of prosecutions ordered during the first three months of 1915. While the number each month is not large, it is hoped that it may become much less as the year progresses.

	Violation of woman's law.	Illegal employment of minors.	Violation of bake- shop law.	Miscellaneous.	Total.
January,	5	5	1	11
February,	10	3	3	16
March,	6	3	11
Total,	21	11	4	1	37

Vol. I

No. 10

SAFETY STANDARDS

OF THE

INDUSTRIAL BOARD



PENNSYLVANIA DEPARTMENT OF
LABOR AND INDUSTRY

FIRE PREVENTION

OPERATIVE ON AND AFTER FEBRUARY 1, 1915

The following safety standards have been adopted by the Industrial Board, subject to the provisions of the Law (Act 267, section 15, P. L. 1913) which provides that persons affected may petition the Board for changes in the regulations. Upon the receipt of such petition, it will be reviewed by the Board and if considered necessary a public hearing will be called in regard thereto.

REGULATION FOR FIRE PREVENTION.

Smoking is prohibited in every work room or stock room in any factory or work shop in this Commonwealth in which readily combustible material is used, handled or stored, and in other parts of such factories where there is an equal fire hazard.

JOHN PRICE JACKSON, Chairman.
GEORGE S. COMSTOCK,
JAMES C. CRONIN,
JOHN P. WOOD,
MRS. SAMUEL SEMPLE,

Adopted January 21, 1915.

Industrial Board.

- (e) All factories used for the manufacture of food products shall be clean, properly lighted and ventilated. The ceilings shall be of sufficient height to permit ample clearance for all work under any suspended shafting, hangers, piping, galleries, etc. Where natural light and ventilation are insufficient, provision shall be made for augmenting the same by mechanical methods. The interiors for all working rooms shall be kept a light color by paint, whitewash or other suitable method.
- (f) The floors shall be tight and pitched to accommodate the machinery—that is, to confine overflow and waste to the smallest area. Gutters shall be provided to carry all waste to sewers.
- (g) Grating of sufficient height to insure free drainage shall be provided around cookers, washers and at other places where overflow is unavoidable.
- (h) At least one seat shall be provided for every three females employed or permitted to work and all such seats shall, during working hours, be conveniently accessible to the workers for whose use they are intended.

OPERATION:

- (a) Any person, firm or corporation now engaged, or intending to engage, in the canning industry shall demonstrate to the satisfaction of the Department of Labor and Industry that the proposed factory and its preparation for operation conform to the regulations issued by the Industrial Board for the government of such business. If such conditions have been met the Commissioner shall authorize the operation of said factory by a certificate of permission good for one year only and revocable at any time for failure to obey said regulations.

WATER-CLOSETS AND PRIVIES:

- (a) Water closets and privies shall be ventilated to the outside and properly lighted and a separate hopper or seat shall be provided for each twenty-five persons using said water closet or

privy. Where water closets are in factories they shall be provided with proper flushing apparatus and connected with a sewer. Privies will not be permitted in or in direct connection with a building.

- (b) The entrance to every water-closet or privy compartment shall be screened by a vestibule or by a stationery screen at least two (2) feet wider than the entrance door, extending to a height of at least six and one-half ($6\frac{1}{2}$) feet.
- (c) Water-closets and privies, including the walls, floors, ceilings and fixtures shall be kept clean and where a privy is used, sufficient slack lime or equivalent disinfectant shall be used each day to prevent odor.
- (d) Every privy vault shall be built with water-tight wall extending at least two feet below and one foot above the surface of surrounding ground, being so covered as to exclude flies.
- (e) Every privy shall be ventilated by an unobstructed opening to the outer air, other than the door, which has an area of at least one hundred and forty-four (144) square inches. Every privy shall be provided with a door. Every window and ventilating opening of a privy shall be protected by screens to prevent the entrance of flies, and every door shall be provided with a self-closing device to keep it closed.
- (f) Dry walks shall be provided from the plant to outside privies.

PROTECTION AND SAFETY:

- (a) All power driven machinery shall have all exposed collars, set screws, shafts, couplings, clutches, keys, pulleys, gearing, belts, revolving and reciprocating parts or projections guarded as specified in Safety Standards, Volume I, No. 1, of the Industrial Board, covering the Transmission of Power.
- (b) All platforms, balconies, and galleries six feet or more above floor level, floor openings, and hoistways, fly wheel and pulley pits, and all other openings in floors and platforms where the

safety of persons below is involved, shall be guarded as specified in Safety Standards, Volume I, No. 2, of the Industrial Board, governing the erection, construction and maintenance of Standard Railings and Toe Boards.

- (c) All lathes, planers, milling machines, boring mills, metal saws, keyseating machines, shapers, slotters, gear cutters, drill presses, etc., shall be guarded as specified in Safety Standards, Volume I, No. 4, of the Industrial Board on Machine Tools.
- (d) All factories above the first story shall be provided with proper ways of egress, or means of escape from fire, sufficient for the use of all persons accommodated, assembled, or employed therein; and such ways of egress and means of escape shall be kept free from obstruction, in good repair, and ready for use, at all times; and all rooms above the second story in said factories shall be provided with more than one way of egress, or escape from fire, which shall be placed as near as practicable at opposite ends or sides of the room, and leading to fire escapes on the outside of such factories or to stairways on the inside. Where any of said factories is designated for the use or occupancy of fifty or more persons, the external doors of the same shall open outward, and be so constructed or arranged as to afford, when open, an unobstructed external passageway of not less than five feet in the clear, and shall have landings, inside of the external doorways, of dimensions not less than four feet between the external doors and the adjoining stairways, said landings to be of a width not less than the stairway approach thereto.

SANITARY PROVISIONS:

- (a) A sufficient supply of cool potable water shall be provided at all times. The use of common drinking cups is prohibited.
- (b) No wearing apparel not in actual use shall be permitted in work-rooms either where food is prepared or placed in containers.

- (c) No person suffering from a communicable disease shall be employed. Persons working in food factories shall be subject to medical inspection under the supervision of the Department of Labor and Industry.
- (d) Outer clothing including head covering used by food preparers shall be of washable material and shall be kept clean at all times.
- (e) Washing places in work-rooms shall be provided conveniently located and of sufficient size and equipment for the accommodation of all employees. Such washing places shall be equipped with a sufficient supply of water and provided with individual towels and plenty of soap.

REST AND DRESSING ROOM:

- (a) In all factories employing or permitting females to work, a suitable wash and dressing room for their use shall be provided so located as to be accessible to such females; and shall be separated from the rooms in which employees work by partitions extending from floor to ceiling; and such rooms shall be furnished with sufficient hooks for the accommodation of the wearing apparel of said females when not in actual use; and shall be provided with a couch and sufficient seats, and washing facilities to accommodate all females. The housing conditions in all labor camps shall conform to the regulations issued for the same by the Pennsylvania Department of Health.

Note:—In addition to the foregoing regulations, compliance with which is required by law, the Industrial Board strongly recommends the observance of the following:

MACHINERY AND EQUIPMENT:

- (a) Machinery and other equipment shall be of a sanitary type and of such material as to admit of cleaning. All tables shall be plain and without sharp angles. Peeling and quartering tables shall be properly drained. All tanks of water in which a product is held before filling into cans shall be provided with a continuous supply of fresh clean water, and with an overflow.

- (b) No scalding or blanching shall be used continuously that is not cleaned at least twice a day. Only potable water shall be used in making syrups or brine or in washing equipment coming in contact with food. No cans shall be brined or syruped by passing through a tank to receive the brine, syrup or water by submergence (dip tank). No syrup, brine or the overflow from a syruping machine, shall be used without filtering and heating to the boiling point. Means shall be maintained at all times for the proper cleaning of all floors, tables, machinery and equipment.
- (c) All machines and conveyors shall be provided with self cleaners. All tables, pails, pans, trays, machines, etc., shall be cleaned with steam or hot water at least once each day and as much oftener as is necessary to prevent souring or insanitary conditions.

PERSONAL SANITATION:

- (a) The smoking, snuffing or chewing of tobacco or snuff, the open blowing of the nose, expectoration, wetting finger in the mouth and all other insanitary personal practices are forbidden and plain notices to this effect shall be conspicuously posted.

JOHN PRICE JACKSON, Chairman.
 GEORGE S. COMSTOCK,
 JAMES C. CRONIN,
 JOHN P. WOOD,
 MRS. SAMUEL SEMPLE,

Industrial Board.

Adopted February 24, 1915.

